

CLAIMS

What is claimed is:

- 5 1. A method for processing digitized images, comprising:
 accessing a set of images digitized from film;
 configuring a template based on properties of the digitized images to process the
digitized images;
 outlining and cutting the digitized images with the template to produce
10 processed digitized image data comprising separated digitized images.
2. The method of claim 1, wherein the template configuration generally
corresponds to the number and size of the analog or digitized images.
- 15 3. The method of claim 1, wherein the template is placed over the digitized
images to cut and separate the digitized images.
4. The method of claim 1, wherein a sheet of digitized images is placed in
the template to cut and separate the digitized images.
- 20 5. The method of claim 1, further comprising storing the processed
digitized image data.
6. The method of claim 1, further comprising at least one of displaying one
25 or more of the separated digitized images on a PACS workstation monitor, collating two
or more of the separated digitized images, comparing two or more of the separated
digitized images, and registering two or more of the separated digitized images.
7. The method of claim 1, wherein two or more of the separated digitized
30 images are displayed in at least one of a cine serial display, a composite, an overlay, and
a stack mode.

8. The method of claim 1, further comprising comparing or registering one or more of the separated digitized images with related digital images.

5 9. The method of claim 1, wherein the images are originally reproduced on the analog sheet of film from image data digitally-acquired by at least one of a magnetic resonance imaging (MRI) system, a computed tomography (CT) imaging, and a digital X-ray imaging system.

10 10. The method of claim 1, wherein the images are acquired with a film-based X-ray imaging system.

11. A method for separating digitized images on a digitized sheet of film, comprising:

15 accessing a digitized sheet of film having a number of digitized images, the sheet of film resulting from scanning of an analog sheet of film reproduced from image data acquired with a medical imaging modality;

configuring a digital template based on the number of digitized images; and

slicing and collating the digitized images by applying the digital template to the digitized sheet..

20 12. The method of claim 11, wherein the digital template is configured and applied with a computer algorithm.

25 13. The method of claim 11, further comprising at least one of storing the collated digitized images, ordering the collated digitized images, displaying the collated digitized images in stack mode or cine mode, displaying the collated digitized images on a PACS workstation monitor, displaying the collated digitized images in combination with a DICOM header defining a series and order of the collated digitized images, registering the collated digitized images, comparing the collated digitized images with
30 digital images, and registering the collated digitized images with digital images.

14. The method of claim 11, wherein original image data of the digitized images reproduced on the sheet of film is acquired with at least one of a magnetic resonance imaging (MRI) system, a computed tomography (CT) imaging, and an X-ray imaging system.

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15. The method of claim 14, wherein the digitized sheet is stored after the sheet of film is scanned to generate the digitized sheet.

16. A method for processing digitized images, comprising:
10 accessing and displaying a scanned image file of a sheet of film having one or more images;
outlining and copying a portion of the image file with a digital template configured to select at least one of the images;
placing the portion of the image file corresponding to the selected image in a
15 desired file; and
adjusting a desired order of digitized images within the desired file and saving the desired file.

17. The method of claim 16, wherein the portion of the image file is placed
20 in the digital template or wherein the digital template is placed over the portion of the image file.

18. The method of claim 17, further comprising displaying the digitized images within the desired file at a PACS workstation in at least one of a stack mode, a
25 cine mode, and a composite.

19. The method of claim 16, further comprising comparing the digitized images within the desired file with digitally-acquired images.

20. The method of claim 16, wherein image data reproduced on the sheet of film is acquired with at least one of a magnetic resonance imaging (MRI) system, a computed tomography (CT) imaging, and an X-ray imaging system.

5 21. A method for processing a scanned image file of a conventional sheet of film, comprising:

accessing and displaying a digitized sheet of film supporting images acquired from one or more imaging systems;

10 cropping and registering individual digitized images within the digitized sheet of film, and grouping of the processed digitized images with digitally-acquired images; and

storing image data of the processed digitized images and digitally-acquired images in a single image file.

15 22. The method of claim 21, further comprising displaying the stored image data of the processed digitized images and digitally-acquired images in at least one of a cine serial mode, a stack mode, an overlay, and a composite.

20 23. The method of claim 22, wherein the one or more imaging systems comprise at least one of a film-based X-ray imaging system, a digital X-ray imaging system, a CT imaging system, and a MR imaging system.

24. A system for processing a scanned image file of a conventional sheet of film, comprising:

25 an interface configured to permit accessing, displaying, reviewing, and processing the digitized sheet of film supporting images acquired from one or more imaging systems, the interface configured to permit cropping and registering individual digitized images within the digitized sheet of film, and grouping of the processed digitized images with digitally-acquired images; and

30 a storage for storing image data of the processed digitized images and digitally-acquired images in a single image file.

25. The system of claim 24, further comprising a second interface for displaying the stored image data of the processed digitized images and digitally-acquired images in at least one of a cine serial mode, a stack mode, an overlay, and a composite.

5 26. The system of claim 25, further comprising a third interface for comparing the processed digitized images with digital images.

27. The system of claim 26, wherein the interface, the second interface, and the third interface are provided on a PACS workstation.

10 28. The system of claim 24, further comprising an analog-to-digital device or scanner for converting analog film images to digitized images.

15 29. The system of claim 24 wherein the one or more imaging systems comprise at least one of a film-based X-ray imaging system, a digital X-ray imaging system, a CT imaging system, and a MR imaging system.

30. A system for processing digitized images, comprising:
means for accessing a set of images digitized from film;
20 means for configuring a template based on properties of the digitized images to process the digitized images;
means for outlining and cutting the digitized images with the template to produce processed digitized image data comprising separated digitized images.

25 31. The system of claim 30, comprising means for configuring the template to generally correspond to the number and size of the digitized images; and
wherein to cut and separate the digitized images, either the template is placed over the digitized images or a sheet of digitized images is placed in the template.

30 32. The system of claim 30, further comprising means for storing the processed digitized image data.

33. The system of claim 30, further comprising means for at least one of displaying the cut digitized images, collating the cut digitized images, registering the cut digitized images, comparing the cut digitized images with digital images, and registering the cut images with digital images.

34. The system of claim 30, comprising means for displaying the cut digitized images in at least one of a cine serial display, a composite, an overlay, and a stack mode.

35. A system for separating digitized images within an image file of a digitized sheet of film, comprising:

means for accessing a digitized sheet of film having a number of digitized images, the sheet of film resulting from scanning of an analog sheet of film reproduced from image data acquired with a medical imaging modality;

means for slicing and collating the digitized images with a digital template;

means for storing the collated digitized images; and

wherein the images are originally reproduced on the analog sheet of film from image data acquired with at least one of a magnetic resonance imaging (MRI) system, a computed tomography (CT) imaging, and an X-ray imaging system.

36. The system of claim 35, further comprising means for displaying the collated digitized images on a PACS workstation monitor in stack mode or cine mode

37. The system of claim 35, further comprising means for ordering and registering the collated digitized images.

38. A system for processing digitized images, comprising:

means for accessing and displaying a scanned image file of a sheet of film having one or more images;

means for outlining and copying a portion of the image file with a digital template configured to select at least one of the images;

means for placing the portion of the image file corresponding to the selected image in a desired file; and

5 means for adjusting a desired order of digitized images within the desired file and saving the desired file.

39. The system of claim 38, wherein the portion of the image file is placed in the digital template or wherein the digital template is placed over the portion of the
10 image file.

40. The system of claim 38, further comprising means for displaying the digitized images within the desired file at a PACS workstation in at least one of a stack mode, a cine mode, and a composite.

41. The system of claim 38, further comprising means for comparing the digitized images within the desired file with digitally-acquired images.

42. The system of claim 38, wherein image data reproduced on the sheet of
20 film is acquired with at least one of a magnetic resonance imaging (MRI) system, a computed tomography (CT) imaging, and an X-ray imaging system.

43. A system for processing a scanned image file of a conventional sheet of film, comprising:

25 means for accessing and displaying a digitized sheet of film supporting images acquired from one or more imaging systems;

means for cropping and registering individual digitized images within the digitized sheet of film, and grouping of the processed digitized images with digitally-acquired images; and

30 means for storing image data of the processed digitized images and digitally-acquired images in a single image file.

44. The system of claim 43, further comprising means for displaying the stored image data of the processed digitized images and digitally-acquired images in at least one of a cine serial mode, a stack mode, an overlay, and a composite.

5 45. The system of claim 43, wherein the one or more imaging systems comprise at least one of a film-based X-ray imaging system, a digital X-ray imaging system, a CT imaging system, and a MR imaging system.

10 46. A digitized image file, comprising image data of designated digitized images cut and copied from a digitized sheet of analog images scanned from a conventional analog sheet of film in sheet mode; and

wherein the digitized sheet of film is cut with a digital template configured based on properties of the analog and digitized images.

15 47. The image file of claim 46, wherein the digitized sheet of analog images was scanned from an analog sheet of film reproduced from image data acquired with at least one of a magnetic resonance imaging (MRI) system, a computed tomography (CT) imaging, and an X-ray imaging system.

20 48. A computer program, provided on one or more tangible media, for processing digitized images, comprising:

a routine for accessing a set of images digitized from film;

a routine for configuring a template based on properties of the digitized images to process the digitized images;

25 a routine for outlining and cutting the digitized images with the template to produce processed digitized image data comprising separated digitized images.

49. The computer program of claim 48, comprising a routine for configuring the template to generally correspond to the number and size of the digitized images; and

30 wherein to cut and separate the digitized images, either the template is placed over the digitized images or a sheet of digitized images is placed in the template.

50. The computer program of claim 49, further comprising a routine for storing the processed digitized image data.

51. The computer program of claim 50, further comprising a routine for at least one of displaying the cut digitized images, collating the cut digitized images, registering the cut digitized images, comparing the cut digitized images with digital images, and registering the cut images with digital images.

52. The computer program of claim 50, comprising a routine for displaying the cut digitized images in at least one of a cine serial display, a composite, an overlay, and a stack mode.

53. A computer program, provided on one or more tangible media, for separating digitized images within an image file of a digitized sheet of film, comprising:

a routine for accessing a digitized sheet of film having a number of digitized images, the sheet of film resulting from scanning of an analog sheet of film reproduced from image data acquired with a medical imaging modality;

a routine for slicing and collating the digitized images with a digital template;

a routine for storing the collated digitized images; and

wherein the images are originally reproduced on the analog sheet of film from image data acquired with at least one of a magnetic resonance imaging (MRI) system, a computed tomography (CT) imaging, and an X-ray imaging system.

54. The computer program of claim 53, further comprising a routine for displaying the collated digitized images on a PACS workstation monitor in stack mode or cine mode

55. The computer program of claim 53, further comprising a routine for ordering and registering the collated digitized images.

56. A computer program, provided on one or more tangible media, for processing digitized images, comprising:

a routine for accessing and displaying a scanned image file of a sheet of film having one or more images;

5 a routine for outlining and copying a portion of the image file with a digital template configured to select at least one of the images;

a routine for placing the portion of the image file corresponding to the selected image in a desired file; and

10 a routine for adjusting a desired order of digitized images within the desired file and saving the desired file.

57. The system of claim 56 wherein the portion of the image file is placed in the digital template or wherein the digital template is placed over the portion of the image file.

58. The system of claim 57, further comprising a routine for displaying the digitized images within the desired file at a PACS workstation in at least one of a stack mode, a cine mode, and a composite.

20 59. The system of claim 57, further comprising a routine for comparing the digitized images within the desired file with digitally-acquired images.

60. The system of claim 57, wherein image data reproduced on the sheet of film is acquired with at least one of a magnetic resonance imaging (MRI) system, a computed tomography (CT) imaging, and an X-ray imaging system.

61. A computer program, provided on one or more tangible media, for processing a scanned image file of a conventional sheet of film, comprising:

30 a routine for accessing and displaying a digitized sheet of film supporting images acquired from one or more imaging systems;

a routine for cropping and registering individual digitized images within the digitized sheet of film, and grouping of the processed digitized images with digitally-acquired images; and

5 a routine for storing image data of the processed digitized images and digitally-acquired images in a single image file.

62. The system of claim 61, further comprising a routine for displaying the stored image data of the processed digitized images and digitally-acquired images in at least one of a cine serial mode, a stack mode, an overlay, and a composite.

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63. The system of claim 61, wherein the one or more imaging systems comprise at least one of a film-based X-ray imaging system, a digital X-ray imaging system, a CT imaging system, and a MR imaging system.

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